

Listing of Claims

1-19 (cancelled)

20. (Currently Amended) A method of radio communication comprising:

at a mobile station:

maintaining at least a first communication group set comprising an ordered list of two or more user groups for the purpose of scanning for radio frequency activity among at least some of the groups, each of the user groups communicating by an European Telecommunications Standard Institute (ETSI) direct mode communication on an associated direct mode radio frequency channel for the group, the direct mode radio frequency channels using different radio frequency carriers; and

conducting a surveillance procedure that includes periodically sampling each of the direct mode radio frequency channels to determine if there is any radio frequency activity comprising a direct mode communication amongst each group on the direct mode radio frequency channel,

determining whether to switch to a different direct mode radio frequency channel through selection by a user of the mobile station when radio frequency activity on the different direct mode radio frequency channel is determined independent of the relative priorities of the direct mode communications.

21. (Previously Presented) The method according to claim 20 wherein each of the direct mode radio frequency channels is sampled to detect a presence signal indicating presence of a particular group associated with the direct mode channel on the direct mode channel.

22. (Previously Presented) The method according to claim 20 wherein samples of at least some consecutive group radio frequency channels whose state is free or unknown are conducted in a single frame.

23. (Previously Presented) The method according to claim 20 wherein if there is currently no group activity on any of the surveyed channels, then a first master mobile station

initiating a call or service to start on any of the groups determines a physical and logical time division pattern for all surveyed channels.

24. (Previously Presented) The method according to claim 23 wherein all mobile stations other than the first master mobile station detecting the first call or service synchronise to the time division pattern, adopting the same frame and slot numbering as the first master mobile station.

25. (Previously Presented) The method according to claim 24 wherein each master mobile station making a direct mode call transmits a presence signal in a specific time slot of the time division pattern to indicate the group to which that direct mode call relates.

26. (Previously Presented) The method of direct mode radio communication according to claim 25 wherein the specific time slot in which a particular master mobile station transmits the associated presence signal is related to a position within the ordered list of the group that the particular master mobile station is communicating with.

27. (Currently Amended) The method of direct mode radio communication according to claim 26 wherein the specific time slot in which the particular master mobile station transmits is within a TErrestrial Trunked RAdio (TETRA) request bit map associated frame related to the position within the ordered list of the group that the particular master mobile station is communicating with.

28. (Currently Amended) The method of direct mode radio communication according to claim 26 wherein the particular master mobile station signals all call or service recipients that the TErrestrial Trunked RAdio (TETRA) request bit map associated time slots are not available for random access requests.

29. (Previously Presented) The method of direct mode radio communication according to claim 26 wherein any slave or idle mobile station surveys a specific time slot on a relevant channel to determine if there is any radio frequency activity, the specific time

slot channel being related to the position within the ordered list of the group that the slave or idle mobile station is currently surveying.

30. (Currently Amended) A mobile station comprising:

storage means storing at least a first direct mode group set comprising an ordered list of two or more user groups together with their respective associated direct mode radio frequency channels, for the purpose of scanning for alternative direct mode radio frequency activity among at least some of the groups, the direct mode radio frequency channels using different radio frequency carriers;

wherein the mobile station is operable, for those groups in the ordered list whose radio frequency channel state is free or unknown, to conduct a channel surveillance procedure wherein each of the direct mode radio frequency channels associated with the groups of the ordered list is sampled periodically to determine if there is any radio frequency activity comprising a European Telecommunications Standard Institute (ETSI) direct mode communication and to switch to a different direct mode radio frequency channel through selection by a user of the mobile station when radio frequency activity on the different direct mode radio frequency channel is determined independent of the relative priorities of the direct mode communications.

31. (Previously Presented) The method of direct mode radio communication according to claim 20 wherein the surveillance procedure is performed independent of whether the mobile station is in an idle state or whether the mobile station is participating as a listener in a direct mode communication.

32. (Previously Presented) The method of direct mode radio communication according to claim 20 further comprising permitting the mobile station to join a call from any group for which direct mode communication was detected by the surveillance procedure as a listener or to initiate a call to members of the detected group.

33. (Previously Presented) The method according to claim 21 wherein when the mobile station is active in a call or service, the mobile station samples one of the direct mode

radio frequency channels to detect the presence signal during each currently unassigned time slot.

34. (Previously Presented) The method according to claim 33 wherein the time slot in which each presence signal is transmitted is dependent on a position within the ordered list of the groups, a unique mapping existing between the time slot and the position within the ordered list of groups.

35. (Previously Presented) The method according to claim 33 when if the number of groups exceeds the number of currently unassigned time slots, the mobile station samples one of the direct mode radio frequency channels to detect the presence signal during a time slot normally reserved for slave or idle but occupied mobile stations.

36. (Previously Presented) The method according to claim 33 wherein the mobile station only listens to direct mode radio frequency channels of groups to which the mobile station is entitled to join.

37. (Previously Presented) The method according to claim 20 wherein each slave and idle mobile station listens to a different direct mode radio frequency channel during a time slot assigned to that direct mode radio frequency channel for a presence signal indicating activity in a group associated with that direct mode radio frequency channel, the time slots being different for each direct mode radio frequency channel.

38. (Previously Presented) The method according to claim 20 wherein a master mobile station, having initiated a call, listens to a different direct mode radio frequency channel during a time slot assigned to that direct mode radio frequency channel for a presence signal indicating activity in a group associated with that direct mode radio frequency channel, the time slots being different for each direct mode radio frequency channel.

39. (Previously Presented) The method according to claim 20 wherein a master mobile station, having initiated a call, listens to the same direct mode radio frequency channel

during different time slots for a presence signal indicating activity in a particular group, each group associated with a unique time slot.